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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/666,391 | 09/19/2003 | David King | 20377/2 | 7505 |

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| EXAMINER | |
|---|---|
| BONK, TERESA | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3725 | |

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/666,391 | KING ET AL. | |
| | Examiner | Art Unit | |
| | Teresa M. Bonk | 3725 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 19 September 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

1. Although in the Brief Description of the Invention applicant sets forth the first, second, and third mechanisms there is no clear written description of the afore mentioned mechanisms in the Detailed Description of the Invention. Therefore, applicant is required to provide a clear written disclosure of the three above-mentioned mechanisms.

### *Claim Objections*

2. Claim 5 is objected to as having a duplication of parts "a second second mechanism." Appropriate action is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is insufficient antecedent basis for this limitation in the claim: "the correct tension."

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani (US Patent 4,367,641) in view of Newman et al. (US Patent 3,421,351), as best understood. Mizutani discloses an apparatus for bending and twisting elongated pieces having a first mechanism (feeding unit 10 having feeding rolls 11) for accepting the metal (rod or bar used on an automobile, based on its use it is inherent that the material's composition would be metal) ribbon of material (decorative molding M) along an axis.

A second mechanism comprising at least one servo motor configured to rotate an end of the ribbon of material (motor 45a, frame 50) and comprising a pair of jaws configured to engage the end of the ribbon ("the support 65 holds the pair of bending rolls 61 which hold the molding M therebetween," Column 3, lines 50-53).

A third mechanism provides movement in the y and z planes (motor 26 for the 'y' plane, motor 36 for the 'z' plane, for 'x' plane refer to Column 2, lines 47-53), a servo motor configured to move the second mechanism (motors 26 and 36), and is configured to move said second mechanism through a first movement phase, the first movement phase including an initial speed, acceleration, deceleration, and an ending speed (Column 4, lines 54-68 and Column 5, lines 1-22). It is known that when a motor is engaged at an initial speed it must accelerate to achieve the operating speed, and when a motor is turned off it must decelerate).

A die positioned downstream of the second mechanism to cut the ribbon (cutter 70) and is capable of cutting the ribbon to form a first and second cut end and releasing the cut ribbon (Figure 3).

Also disclosed is an apparatus capable of moving the first end of the material along in axis in a first movement pattern including a first servo motor (19) configured to provide the axial and a different second movement pattern where the first end of material is rotated about the axis, other than a constant rotation, wherein the acceleration of the material id the first direction is different from the acceleration of the rotation of the material (Column 4, lines 54-68 and Column 5, lines 1-22).

6. Mizutani discloses the invention substantially except for a third mechanism for moving said second mechanism substantially parallel to the axis, said third mechanism configured to operate independently from the operation of said mechanism. Newman et al. discloses a method of forming bar screws having a third mechanism for moving said second mechanism substantially parallel to the axis, said third mechanism configured to operate independently from the operation of said mechanism (Column 2, lines 29- 48). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mizutani with Newman to move the mechanism along the x plane in order to achieve a "relatively precise positioning mechanism" (Column 1, lines 32-33).

7. Mizutani discloses the invention substantially except for the ribbon having a helical shape with a plurality of triangular shaped facts of similar size and shape. Newman et al. discloses having formed a ribbon of helical shape with a plurality of triangular shaped facts of similar size and shape (See Figure 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided Mizutani with a resulting helical shape as in Newman et al.'s invention, in order to achieve a desired product.

8. Mizutani discloses the invention substantially except for having a spindle head with a pair of jaws to engage the first end of the ribbon material with the correct tension. Newman et al. discloses a having a spindle head (30) with a pair of jaws (elongated friction shoes 144) to engage the first end of the ribbon material with the correct tension (Column 6, lines 2-4, "Also, mounted in the spindle are tension devices in the form of elongated friction shoes 144 spring biased against the opposite flat sides of the bar.") Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Newman et al.'s spindle

head in Mizutani's invention in order to "to exert a retarding force on the bar as it enters the twisting rollers" (Column 6, lines 4-5).

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and further shows the state of the art: US Patent 5,107,694, US Patent 4,601,187, and JP 63260628 A.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa M. Bonk whose telephone number is (571) 272-1901. The examiner can normally be reached on M-F 7:30AM - 5PM with alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-9900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Teresa M. Bonk
Examiner
Art Unit 3725

DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700